

UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
GULF OF MEXICO REGION
ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **15-JUN-2009** TIME: **0900** HOURS

2. OPERATOR: **Mariner Energy, Inc.**

REPRESENTATIVE: **Maxwell, Joyce**

TELEPHONE: **(337) 265-2610**

CONTRACTOR:

REPRESENTATIVE: **Broussard, Matt**

TELEPHONE: **(337) 365-6595**

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR
ON SITE AT TIME OF INCIDENT:

4. LEASE: **G08680**

AREA: **SM** LATITUDE:

BLOCK: **18** LONGITUDE:

5. PLATFORM: **A**

RIG NAME:

6. ACTIVITY: ☐ EXPLORATION (POE)
☒ DEVELOPMENT/PRODUCTION
(DOCD/POD)

7. TYPE:

☐ HISTORIC INJURY

☒ REQUIRED EVACUATION 1
☐ LTA (1-3 days)
☐ LTA (>3 days)
☐ RW/JT (1-3 days)
☒ RW/JT (>3 days) 1
☐ Other Injury

☐ FATALITY
☐ POLLUTION
☒ FIRE
☒ EXPLOSION

LWC ☐ HISTORIC BLOWOUT
☐ UNDERGROUND
☐ SURFACE
☐ DEVERTER
☐ SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION ☐ HISTORIC ☐ >\$25K ☐ <=\$25K

☐ STRUCTURAL DAMAGE
☐ CRANE
☐ OTHER LIFTING DEVICE
☐ DAMAGED/DISABLED SAFETY SYS.
☐ INCIDENT >\$25K
☐ H2S/15MIN./20PPM
☐ REQUIRED MUSTER
☐ SHUTDOWN FROM GAS RELEASE
☐ OTHER

6. OPERATION:

☒ PRODUCTION
☐ DRILLING
☐ WORKOVER
☐ COMPLETION
☐ HELICOPTER
☐ MOTOR VESSEL
☐ PIPELINE SEGMENT NO.
☒ OTHER **Construction**

8. CAUSE:

☐ EQUIPMENT FAILURE
☒ HUMAN ERROR
☐ EXTERNAL DAMAGE
☐ SLIP/TRIP/FALL
☐ WEATHER RELATED
☐ LEAK
☐ UPSET H2O TREATING
☐ OVERBOARD DRILLING FLUID
☐ OTHER _____

9. WATER DEPTH: **75** FT.

10. DISTANCE FROM SHORE: **45** MI.

11. WIND DIRECTION:
SPEED: M.P.H.

12. CURRENT DIRECTION:
SPEED: M.P.H.

13. SEA STATE: FT.

17. DESCRIBE IN SEQUENCE HOW ACCIDENT HAPPENED:

On June 15, 2009, at approximately 0910 hours, on Mariner Energy Inc's Lease OCS-G08680, South Marsh 18 A platform, a contract rigger (CR) received minor burns to both legs and back due to a polycarbonate methanol tank exploding during welding and burning operations. The CR was the designated fire watch as per the Job Safety Analysis (JSA). The welding contractors were in the process of pre-fabricating a boat landing for another offshore platform. The welding machine was used during the fire watch and was located approximately 4' 6" from the methanol tank. The unit was properly grounded but not intrinsically safe as a result of exposed wiring. The CR began using the acetylene cutting torch located approximately 18' from the methanol tank. At approximately 0900 hours, the contract supervisor signaled employees to take a break. The CR stopped operations and secured cutting equipment. As the CR turned to walk away from the work site, the methanol tank exploded igniting the existing methanol that was located in the tank. According to the lessee, there was only a small quantity of methanol in the tank before the explosion. The fire was extinguished with a single 30 lb. fire extinguisher. The CR was flown to a hospital where he received treatment and was released for the burns he received.

18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

Boards that were found in the containment pan under the methanol tank were charred on the edges indicating the boards were burning prior to the methanol tank explosion. The boards contained the pan under the tank and the pan was noted to have methanol residue. The welding and cutting operations provided the heat source to ignite the wood and/or pan residue. Therefore, ignition from welding and/or torch slag were probable causes of the accident.

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

- *Prior to any welding or burning operations being conducted, personnel failed to adequately assess the area for flammables before issuing a hot work permit.
- *As per the JSA, the designated fire watch had multiple duties.
- *The current approved Area Classification drawing on file with MMS was not updated to show the current chemical skid configuration. Specifically, the drawings failed to include the methanol containment skid, which could have identified the worksite/skid location as being designated a hazardous area.
- *As per the Material Safety Data Sheet (MSDS) for methanol, methanol containers should not be exposed to pressurizing, cutting, welding, brazing, soldering, drilling, grinding or exposure to heat, sparks, flame, static electricity or other sources of ignition.

20. LIST THE ADDITIONAL INFORMATION:

The Lessee is ultimately responsible for ensuring safe construction operations on their facility. Mariner Energy Inc. (MEI) has reviewed the results of their investigation with the contractors conducting the welding and burning operations. The contractors have initiated additional training in identifying hazards while conducting welding and burning operations and reviewing MEI's welding and burning plan prior to arriving on location. The MEI Welding and Burning Safe Practices and Procedure Plans (WBSP) were not on location prior to the welding/burning operation as stated during

the onsite investigation. MEI is also inspecting all of their locations to ensure that "Flammable" labels are on all containers that contain flammable substances, which may assist in preventing future occurrences of this nature.

21. PROPERTY DAMAGED:

Polycarbonate tank

NATURE OF DAMAGE:

Ruptured

ESTIMATED AMOUNT (TOTAL):

\$500

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The MMS Lafayette District office makes no recommendations to the MMS Regional Office of Safety Management (OSM)

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

The following Incidents of Noncompliance (INCs) were issued "After the Fact" to document that on June 15, 2009, Mariner Energy, Inc. failed to conduct welding, burning and hot tapping operations in a safe manner.

Incident of Noncompliance (INC) G-300 is issued to document that on June 15, 2009, Mariner Energy, Inc. failed to ensure that a copy of the welding, burning and hot tapping plan and approval letter was available on the facility.

Incident of Noncompliance (INC) G-303 is issued to document that on June 15, 2009 Mariner Energy, Inc. failed to ensure equipment containing hydrocarbons or other flammable substances be relocated at least 35 feet horizontally from the welding site and from the point of impact of slag, sparks or burning materials at a lower elevation, or otherwise protected.

Incident of Noncompliance (INC) G-311 is issued to document that on June 15, 2009 Mariner Energy, Inc. failed to ensure during welding and burning operations in areas other than approved safe welding and burning areas, that one or more persons, with no other duties during welding or burning operations, been designated as fire watch

Mariner Energy, Inc. is advised to submit a letter of explanation addressing these INC's, including plans for eliminating future incidents of this nature, to the MMS Lafayette District.

25. DATE OF ONSITE INVESTIGATION:

15-JUN-2009

26. ONSITE TEAM MEMBERS:

Raymond Johnson / Gerald Gonzales
/ Wade Guillotte / Tom Basey /

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Elliott S. Smith

APPROVED

DATE: 03-AUG-2009

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Welding and Cutting Operations**

2. TYPE OF FUEL: ☐ GAS
☐ OIL
☐ DIESEL
☐ CONDENSATE
☐ HYDRAULIC
☒ OTHER **Methanol**

3. FUEL SOURCE: **Methanol Tank**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE
KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **NO**

5. TYPE OF FIREFIGHTING EQUIPMENT UTILIZED: ☒ HANDHELD
☐ WHEELED UNIT
☐ FIXED CHEMICAL
☐ FIXED WATER
☐ NONE
☐ OTHER